STAFF REPORT

SUPPLY AND COST OF ALTERNATIVES TO MTBE IN GASOLINE

TECHNICAL APPENDICES

Report on Tax Incentives For Ethanol

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Evaluating the Cost and Supply of Alternatives to MTBE in California's Reformulated Gasoline

Project Report
Oxygenate Subcontractor

Task 3: Report on Tax Incentives for Ethanol

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Introduction

Ethanol in the United States is subsidized by the Federal Government. The subsidy is not paid directly to companies that produce ethanol (except for the "small ethanol producers credit", see below). Rather, it generally accrues to companies that blend ethanol with gasoline, i.e., sellers of gasohol.

The result is that each gallon of ethanol that is blended with gasoline by a gasoline distributor or retailer results in a $.54 per gallon tax credit. As explained below, this credit can either be claimed as an excise tax exemption or an income tax credit. However, the distributor or retailer must have an income tax obligation during the year in order to claim the credit.

In all cases, to qualify for an excise tax exemption or an income tax credit, ethanol used as a motor fuel cannot be produced from petroleum, natural gas, coal, or peat. In other words, the ethanol must be biomass-derived.

Excise Tax Exemption [1]

Historically, the partial excise tax exemption has been much more important than the income tax credits in terms of the amount of tax benefits claimed. The current federal excise tax on gasoline is 18.4 cents per gallon.

The IRS refers to all blends of gasoline and ethanol as "gasohol" (For the purposes of this subsidy three discrete ethanol blends are allowed. They are: a 10 percent ethanol blend, 7.7 percent blend, and 5.7 percent blend). The partial excise tax exemption may be claimed by blenders of gasohol or by the distributors that sell them the gasoline used to make gasohol. The partial exemption may be claimed when the blenders or distributors file their quarterly federal excise tax returns (IRS Form 720), when blenders file their annual income tax returns, or, if certain conditions are met, when blenders file quarterly claims for refunds of excise taxes.

If a blender is claiming the partial tax exemption by selling gasohol, the blender claims the exemption based on the amount of ethanol present in the gasohol. The base exemption is for gasohol that contains 10 percent ethanol blended with 90 percent unleaded gasoline. This 10 percent ethanol blend is taxed at 13.0 cents per gallon, which is a 5.4 cents per gallon exemption from the federal tax of 18.4 cents per gallon. Gasohol that contains 7.7 percent or 5.7 percent ethanol is granted a tax exemption prorated from the base 5.4 cent exemption. In each case, the exemption equates to 54 cents per gallon of ethanol used [2]:

Ethanol blend per gallon gasohol	**Tax exemption per gallon of gasohol**	**Excise tax rate per gallon of gasohol**
10% blend	5.4 cents/gallon	13.0 cents/gallon
7.7% blend	4.158 cents/gallon (.77 * 5.4)	14.242 cents/gallon
5.7% blend	3.078 cents/gallon (.57 * 5.4)	15.322 cents/gallon

[1] Information on the excise tax exemption obtained from IRS Publication 510: "Excise Taxes for 1998; Fuel Taxes", and GAO Report No. 97-41, March 1997, "Report to the Chairman, Committee on Ways and Means, House of Representatives: Effects of the Alcohol Fuels Tax Incentives."
[2] See IRS Form 720, "Quarterly Federal Excise Tax Return"

If a gasoline distributor sells gasoline to a blender for use in blending with ethanol, the distributor claims an excise tax exemption on that portion of each gallon of gasoline that will be blended with ethanol. For example, if the gasoline is sold to a blender who will produce gasohol containing 10 percent ethanol, the excise tax on the gasoline is adjusted for the fact that only 90 percent of the gasoline sold is used in the final fuel mix (13 cents per gallon gasohol tax rate multiplied times 1/.90 equals an effective tax rate on gasoline of 14.444 cents per gallon, or an exemption of 3.956 cents per gallon). The rate for gasoline sold to create each ethanol blend is listed below. In all cases, the exemption equates to 54 cents per gallon of ethanol used[3]:

Gasoline Sold/Bought	**Tax exemption per gallon of gasoline**	**Excise tax per gallon of gasoline**
Gasoline sold or bought for producing gasohol containing at least 10% ethanol	3.956 cents/gallon	14.444 cents/gallon (13.0 * 1/.90)
Gasoline sold or bought for producing gasohol containing at least 7.7% ethanol	2.970 cents/gallon	15.430 cents/gallon (14.242 * 1/.923)
Gasoline sold or bought for producing gasohol containing at least 5.7% ethanol	2.152 cents/gallon	16.248 cents/gallon (15.322 * 1/.943)

This partial tax exemption lowers the after-tax cost of the gasoline that fuel blenders mix with ethanol. Distributors that claim the tax exemption will reduce the price of the gasoline they sell to ethanol blenders by the amount of the tax reduction (distributors are just as well off selling gasoline at a lower price and receiving a tax exemption as they are selling gasoline at a higher price and receiving no exemption).

Gasohol blenders can also claim a refund of the overpayment of the excise tax on gasoline sold to them by a distributor if that gasoline was sold without a tax reduction.

Income Tax Credit[4]

The ethanol subsidy may also be claimed via an income tax credit. There are three credits that can be claimed against the federal income tax. Each of the tax credits is aimed at a distinct type of business:

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[3] Ibid.
[4] Information on the income tax credit obtained from IRS Publication 510: "Excise Taxes for 1998; Fuel Taxes", and GAO Report No. 97-41, March 1997, "Report to the Chairman, Committee on Ways and Means, House of Representatives: Effects of the Alcohol Fuels Tax Incentives."

1. The “alcohol mixtures credit”: This credit allows businesses that mix ethanol with other motor fuels and use the blend in a trade or business or sell the blend as fuel. The credit allows the blenders to reduce their income taxes by 54 cents for each gallon of biomass ethanol used in their blended fuel. The ethanol must be at least 190 proof for the full 54 cent per gallon credit. Alcohol that is between 150 and 190 proof is eligible for a 45 cent per gallon credit. No credit is available for alcohol that is less than 150 proof.

2. The “alcohol credit”: This credit allows businesses to reduce their income taxes by 54 cents for each gallon of neat biomass ethanol fuel that they sell at the retail level or use themselves in their trade or business. Straight alcohol sold at the retail level is placed directly in the fuel tank of the buyer’s vehicle and is not mixed with any other fuel.

3. The “small ethanol producers credit”: This credit allows businesses that produce less than 15 million gallons of ethanol for fuel each year to reduce their income taxes by 10 cents for each gallon produced. The ethanol must be used or sold for use as a motor fuel.

Note on Income Tax Credits

At the time the income tax credits were instituted, only the excise tax exemption existed as a way to claim the ethanol subsidy, and the exemption at the time only applied to 10 percent ethanol blends. Congress wished to allow blenders to mix ethanol at blends lower than 10 percent and still be eligible for the subsidy. Also, Congress wished to grant the incentives to ethanol users who were exempt from excise taxes, such as farmers. Thus the income tax credits were created as an extension and broadening of the ethanol tax subsidy.

Status of ETBE

In 1990, final federal regulations provided that ethanol used for producing ethyl tertiary butyl ether (ETBE) generally is treated as alcohol for purposes of the “alcohol mixtures” income tax credit when the ETBE is mixed with gasoline. In 1993, final regulations accepted gasoline and ETBE blends as qualifying for the partial exemption from the gasoline excise tax, effective October 1, 1995. These regulations stipulated that gasoline refiners could claim the partial exemption for gasoline/ETBE blends that are blended inside the refinery gate and then distributed to bulk terminals. For example, a gasoline/ETBE mixture would qualify as 5.7 percent gasohol if the mixture contains 12.7 percent ETBE and each gallon of ETBE is made from .45 gallon of ethanol. [5]

ETBE blend per gallon gasoline	Tax exemption per gallon of ETBE blended gasoline	Excise tax rate per gallon of ETBE blended gasoline
17.1% blend (equivalent to 7.7 % ethanol blend)	4.158 cents/gallon (.77 * 5.4)	14.242 cents/gallon
12.7% blend (equivalent to 5.7 % ethanol blend)	3.078 cents/gallon (.57 * 5.4)	15.322 cents/gallon

[5] Federal Register, Volume 59, October 19, 1994: “Gasoline and Diesel Fuel Excise Tax; Rules Relating to Gasohol; Tax on Compressed Natural Gas.”

ETBE does not commingle with water as ethanol does. However, when a gasoline/ETBE blend is produced inside the refinery gate and then transported via pipeline to the terminal rack, some of the alcohol content (the ethanol derived ether) may have been diluted with non-qualifying blends because of the use of common-carrier pipelines, barges, and non-segregated storage facilities. As a result, the gasoline/ETBE blend removed at the terminal rack may not qualify for the reduction from the regular tax rate for gasoline due to commingling between the refinery and terminal rack. Federal regulations stipulate that gasoline that does not contain the required volume of ethanol cannot qualify for tax incentives.

Final federal regulations resolved this issue in the following way. Ordinarily, federal regulations provide that the bulk removal of gasoline by an IRS-registered refiner for delivery to a terminal operated by an IRS-registered terminal operator is not subject to the federal excise tax. However, the regulations were changed so that refiners registered by the IRS could designate themselves as “not registered” for the bulk removal of “gasohol” (in this case, gasoline blended with ETBE). In this way, the refiner will be liable for the excise tax, but because it is considered “gasohol” it is eligible for a reduced rate. The final regulations also provide that the refiner is not required to deposit this tax before filing the return relating to that tax. The ETBE/gasoline blend will be taxed at the full rate when it is removed from the terminal rack, but the position holder at this time can apply for a refund on this second tax.[6]

How Blenders/Producers Benefit from Tax Incentives

The tax incentives described above allow ethanol to be priced competitively with gasoline and MTBE, which are substitutes for ethanol, despite the fact that the cost of production for ethanol is higher than these fuels. Since the incentives are equal to 54 cents per gallon of ethanol, the effective or after tax price that the ethanol blender receives for ethanol is 54 cents less than the price at which ethanol is sold by the alcohol producer. In other words, producers can charge a price for ethanol that is high enough to cover the cost of production, while blenders buy alcohol at a price that is competitive with gasoline and MTBE.

Summary

In summary, the ethanol subsidy is accomplished in two ways:

1. by granting a 5.4 cent per gallon partial excise tax exemption for gasohol fuels, and
2. by allowing a 54 cent per gallon income tax credit for ethanol used as a fuel.

The EXCISE TAX exemption is available to taxpayers who:

1. Are liable for the tax on the removal or entry of gasohol (including blends less than 10% ethanol), or
2. Are liable for the tax on the removal or entry of gasoline used to make gasohol

[6] Federal Register, Volume 60, August 7, 1995: “Gasohol; Compressed Natural Gas.”

The INCOME TAX credit is available to taxpayers who:

1. produce or blend an alcohol/fuel mixture, or
2. sell or use for business 100% straight alcohol actually placed in the vehicle's fuel supply tank by the taxpayer.